

**CAPACITANCE MEASUREMENT-BASED MECHANISM FOR
LOCATING OPEN TELECOMMUNICATION LINE FAULT**

ABSTRACT

To locate an open fault along a telecommunication wireline pair, a prescribed frequency tone is coupled to the wireline pair by way of a center tap of the transformer through which a line card is coupled to a subscriber loop. The line card's analog front end conducts capacitance to ground measurements on the tip and ring segments of the wireline pair. From these measurements, sum and difference distance values of respective tip and ring conductor lengths are derived. The sum and difference distance values are then processed to calculate the distance to the fault.